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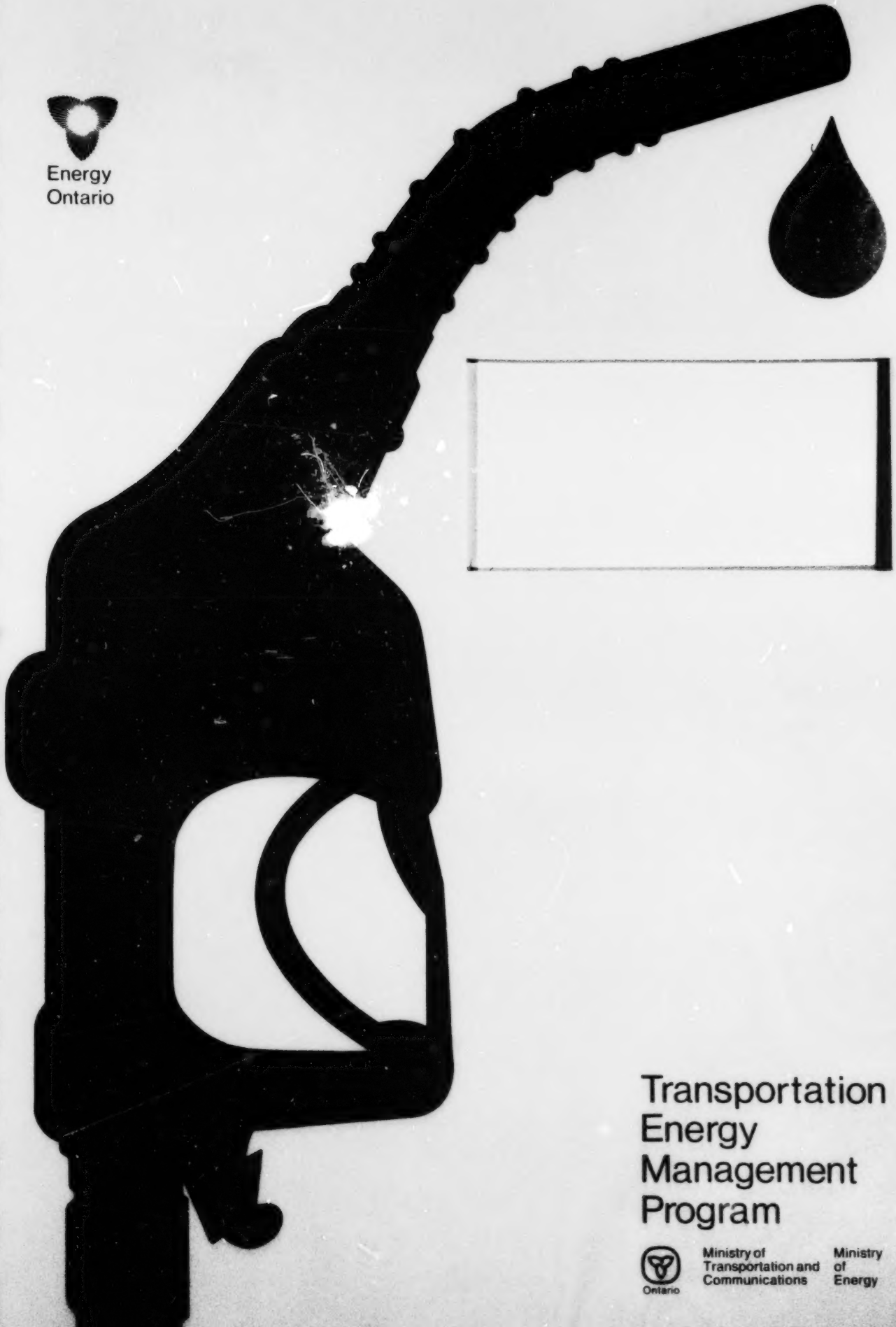

Transportation Energy Management Program

Ontario

Ministry of Transportation and Communications

Ministry of Energy

The Status of Worker Bus Operations in Ontario

The Status of Worker Bus Operations in Ontario

G. Allen
Transportation Planner
Transportation Energy Management Program, MTC

B. Haigh
RVA Consultants

Published by:
The Transportation Energy Management Program

Transportation Technology and Energy Branch
Ontario Ministry of Transportation and Communications
Hon. James W. Snow, Minister
H. F. Gilbert, Deputy Minister

Ontario Ministry of Energy
Hon. Philip Andrewes, Minister
D.M. Allan, Deputy Minister

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The Editor, Technical Publications
Ministry of Transportation and Communications
1201 Wilson Avenue
Downsview,Ontario
Canada
M3M 1J8

May 1984

Technical Report Documentation Page

MTC Report Number	ISBN Number:	Other Document Number:	Date: May 1984
Title: The Status of Worker Bus Operations in Ontario			
Authors (name, title and/or organisation): G. Allen, Research Officer B. Haigh, RVA Consultants			
Published by: The Transportation Energy Management Program, MTC		**Client Group:**	
Participating Agencies: Ontario Ministry of Energy			

Abstract:
This report was prepared to determine the status of worker bus operations in Ontario, and to identify potential opportunities for the expansion of such services within the province. The report includes a detailed review of worker bus operations by sponsorship group as well as an examination of the legal aspects, costs and benefits associated with these services.

The study revealed that a total of 164 vehicles were operating on the 67 routes investigated. These vehicles carried almost 7000 passengers a day an average one-way route length of 56 km. The mean fare cost for each passenger was calculated to be 2.60¢/km.

Worker bus services were organized by five different types of sponsors as follows:
- Employer
- Owner Operator
- Employee Group
- Bus Company
- Transit Authority

Worker bus operations fall within the realm of the Public Vehicle Act. This act does not pose any impediment to the expansion of worker bus operations in Ontario.

Due to the existing worker buses in the province, annual travel cost savings are in the order of $20 million. This figure includes $8 million in fuel saving. A further $5 million saving can be claimed due to the elimination of automobile parking spaces.

Key Words: Bus, Vanpooling, Public Vehicle

Comments:

Distribution: By request.

Copyright Status: Crown copyright.

CONTENTS

PAGE

LIST OF TABLES AND FIGURES iii

SUMMARY iv

1/ INTRODUCTION 1

2/ REVIEW OF WORKER BUS OPERATIONS BY SPONSORSHIP GROUP 2
2.1/ Locations and Services. 2
2.2/ Employee Sponsored. 3
2.3/ Employer Sponsored. 3
2.4/ Bus Company Sponsored 4
2.5/ Transit Authority Sponsored 5

3/ LEGAL AND LABOUR ASPECTS 6
3.1/ An Outline of the Public Vehicles Act 6
3.2/ Types of Services Allowed by an Operating Licence 7
3.3/ Labour Union Aspects 8

4/ COSTS AND BENEFITS 10
4.1/ Costs 10
4.2/ Benefits. 11

5/ OPPORTUNITIES 13
5.1/ Existing Worker Bus Market. 13
5.2/ Existing Vanpool Market 14
5.3/ Potential Market for Worker Buses 14

6/ CONCLUSIONS 17
6.1/ Status of Operations. 17
6.2/ Opportunities 18

APPENDIX A/ Details of Worker Buses 31

LIST OF TABLES

PAGE

1/ Known Operating Licence Holders for Worker Buses in Ontario. . . 20
2/ Locations of Worker Buses Providing Services in Ontario 21
3/ Characteristics of Worker Buses in Ontario 22
4/ Estimated Costs Associated with Worker Buses, 1982 23
5/ Existing Worker Bus Market 24
6/ Employer Sponsored Vanpools in Ontario, 1983 25
7/ Existing Vanpool Market. 26

LIST OF FIGURES

1/ Worker Buses Providing Commuter Services in Southern Ontario . . 27
2/ Worker Buses Providing Commuter Services in Northern Ontario . . 28
3/ Annual Costs of Worker Bus Operation: For 50 km
One-way Daily Trip 29
4/ Comparison of Markets for Worker Buses and Vanpools 30

LIST OF TABLES IN APPENDIX A

A1/ Employee Sponsored: Owner Operator. 32
A2/ Employee Sponsored: Employee Group. 33
A3/ Employer Sponsored: Fare Charged. 34
A4/ Employer Sponsored: No Fare -- Mines & Hydro Facilities 35
A5/ Employer Sponsored: No Fare -- Colleges 36
A6/ Employer Sponsored: No Fare -- Factories and Farms. 37
A7/ Bus Company Sponsored. 38
A8/ Transit Authority Sponsored. 39

SUMMARY

This report was prepared to determine the status of worker bus operations in Ontario, and to identify the potential opportunities for the expansion of such services within the province. The report includes a detailed review of worker bus operations by sponsorship group as well as an examination of the legal aspects, costs and benefits associated with these services.

A list of public vehicle licence holders was used to make the initial identification of worker bus routes in Ontario. It was established that there were 159 licensed worker bus routes in Ontario at the time of the study. Licensees from 67 of these routes were contacted by telephone for information pertaining to their specific operations. It was found that an additional 46 routes had ceased operations prior to the onset of the study; consequently, information could not be obtained on these services.

The study revealed that a total of 164 vehicles were operating on the 67 routes investigated. These vehicles carried almost 7000 passengers a day an average one-way route length of 56 km. The mean fare cost for each passenger was calculated to be 2.60¢/km.

Worker bus services were organized by five different types of sponsors as follows:

- Employer
- Owner Operator
- Employee Group
- Bus Company
- Transit Authority

It was found that employers sponsored 104 worker buses to mines, hydro facilities, colleges, farms and small factories. Owner operators provided six buses to large factories which employed 1500 people or more, while employee groups sponsored 18 vehicles to mines, hydro facilities, small factories and office sites. Bus companies sponsored 13 vehicles to

mines, hydro facilities, relocated factories and office sites. The remaining group which consists of the transit authorities sponsored 23 vehicles for local services primarily to large factories on the outskirts of their municipalities.

Worker bus operations fall within the realm of the Public Vehicle Act. This act does not pose any impediment to the expansion of worker bus operations in Ontario.

Annual fuel and maintenance costs for a worker bus are about 50% of the total annual costs. Vehicle costs can be reduced from a maximum of 40% of the total annual costs if the vehicle is used for other purposes during the day. Similarly, driver costs can be reduced if an employee driver is used.

Due to the existing worker buses in the province, annual travel cost savings are in the order of $20 million. This figure includes $8 million in fuel saving. A further $5 million saving can be claimed due to the elimination of automobile parking spaces.

The study concludes that opportunities for worker bus services appear limited to:

- mines and hydro facilities where excessive travel distances (i.e., greater than 120 km one way) are incurred or where employee collective agreements make worker buses necessary;

- colleges, farms and small factories where public transportation is not available and the employees/students do not have the use of an automobile.

The provision of commuter services to large factories and offices located in suburban areas has been met to date by owner operated or employer sponsored vanpools. It is suggested that bus companies could penetrate this market by using smaller, more comfortable vehicles i.e., vans and promoting and providing such vehicles and related support services to these employers.

1/ INTRODUCTION

This report was initiated to determine the current status of worker bus (buspool) operations in Ontario, and to identify limitations to the further expansion of such services within the Province. The study was directed by a technical committee comprised of staff from the Transportation Energy Management Program, Transportation Demand Forecasting, Bus Transportation, and Legal Services offices of the Ministry of Transportation and Communications (MTC).

Worker bus services have been organized in various locations throughout the Province in order to meet the transportation needs of employees who are not adequately served by conventional bus services. Unlike conventional bus operations, worker bus passengers are identified and signed up prior to the provision of the service; as a result, specialized commuter operations can be tailored to transport people to and from their place(s) of employment.

Over the past 10 years, the United States has seen a rapid growth in individual worker bus services to specific commuter groups and in worker bus services as part of a larger program involving both carpooling and vanpooling. In Ontario, MTC has promoted carpooling and vanpooling since 1978 as part of its Transportatation Energy Management Program (TEMP); however, worker buses have not been promoted despite their apparent economic advantages.

High load factors and low operating costs generally make worker buses more efficient and economical than any available alternative transportation mode. The cost to the commuter is usually less than that for public transit. One worker bus can save approximately 100 000 L of gasoline a year by displacing commuting trips made by private automobiles.

In this report, worker bus operations are reviewed by sponsorship group. A sponsor consists of any company, group or individual who undertakes to organize and finance a worker bus operation. Sponsorship of the worker bus operation can be undertaken by an individual or group of employees, an employer, bus company or transit authority. The report also examines the costs, benefits, legal and labour aspects of worker bus services in Ontario as well as the potential opportunities for such operations.

2/ REVIEW OF WORKER BUS OPERATIONS BY SPONSORSHIP GROUP

It was found that there were 101 public vehicle licence holders for 159 licensed worker bus routes in Ontario at the time of the study (Table 1). Forty of these licence holders were contacted by telephone for information on 67 of the routes.

In 84% of the cases investigated, the vehicle owner holding the public vehicle licence was either a bus company or transit authority, thus ensuring the availability of back-up drivers and vehicles. Owners of 16% of the buses were either owner operators or employers. It is important to note that the licence holders were not necessarily sponsors of their vehicles.

2.1/ Locations and Services

The licensees revealed that 37% of the routes went to hydro facilities and mines; 32% to colleges, farms and small factories; 27% to large factories and offices, while only 4% travelled to relocated factories (Table 2). The routes servicing the factories were scattered throughout Southern Ontario, while all of the office sites were located in downtown Ottawa. The college routes originated in small Southern Ontario communities. The farm and forest sites were located primarily on the outskirts of the Toronto region and in Southwestern Ontario (Figure 1). As may be expected, the mines and hydro construction sites were in remote areas and a significant number of such sites were located in Northern Ontario (Figure 2).

The vehicles used in most of the operations generally held between 40-50 passengers. School buses predominated; however, highway coaches were often used for longer trips. The buses were often modified to provide a more acceptable ride.

In some cases, the service was initially sponsored by an employer or employee group and later sponsorship was transferred to a bus company or transit authority. However, the original sponsorship was still in effect in most instances.

The various sponsorship groups are examined as follows (Table 3).

2.2/ Employee Sponsored

- **Owner Operator** -- Sponsorship is a private arrangement in which the bus is owned and operated by one individual as a business venture. The owner operator generally purchases a new vehicle outright and charges a set fare for the commuters who use the service. There were five licensed routes in this category. These routes travelled to three factories, each employing over 1500 people.

  Vans were used on two routes. One vehicle made several daily trips on the shortest route. Generally, these services were implemented for the potential profit to the owner operator. Back-up drivers received free rides as an incentive.

- **Employee Group** -- Sponsorship is undertaken jointly by a group of employees who organize and finance the worker bus service to their common place of employment. In all the cases investigated, buses were leased from a bus company. Seven of the 12 licensed routes serviced mines and hydro facilities. Four of the five remaining routes serviced numerous offices in downtown Ottawa; the last route going to a relocated factory in Brockville employing 700 people. The bus company was the licensee in all cases; however, employee drivers were used on 50% of these routes.

The reasons for implementation varied. The employees from the mines and hydro construction site initiated worker bus services because driving distances of 170 km and over were considered too long, and/or provision of transportation was part of the workers' collective agreement. One route was established due to factory relocation. The remaining routes to the downtown Ottawa offices were presumably initiated by groups of office workers who regarded the 70 km driving distance as excessive. Employee drivers received a free ride and in some cases a small payment.

2.3/ Employer Sponsored

- **Fare Charged** -- There were eight licensed routes in this category. Five of the eight routes serviced sites in which employees generally

did not have access to alternative modes of transportation. These sites included colleges, farms and small factories which utilized unskilled labour. In addition, there were two licensed routes to the Atomic Energy of Canada (AECL) nuclear laboratory in Chalk River, and one to the Ontario Hydro construction site at Douglas Point. These latter services accounted for 95% of the passengers carried in this category.

It appears that the lack of an automobile necessitated the provision of worker bus services to the small factories, farms and colleges. The AECL operation was unique in that it was a remote site with a high concentration of employees who all resided in the same area. The service to the Ontario Hydro construction site was provided as part of a collective agreement.

- **No Fare Charged** -- Sixteen of the 25 licensed routes went to colleges, farms and small factories. Two routes serviced Ontario Hydro generating stations and the remaining seven went to mines. Average route lengths were in the area of 60 km, except in the cases of the farms and small factories where the average was 40 km. Most operations involved one or two vehicles. The bus company was the licensee and supplier of the driver for all but three of the routes. These latter three routes were to farms.

  The services to mines and Ontario Hydro facilities were implemented due to the remoteness of the sites, the high employment concentration and the fact that the employees lived in the same general area. Services to colleges, farms and small factories were provided because the employees had no alternative means of transportation.

2.4/ Bus Company Sponsored

Three of the seven licensed routes went to mines, and one route serviced the Ontario Hydro construction site at Douglas Point. Two routes serviced a single factory which has recently relocated in Renfrew. The remaining route serviced offices in downtown Ottawa.

The factory services were initially sponsored and subsidized by the employer, however, ridership decreased after the subsidy was withdrawn. The reasons for the implementation of the services to both the Douglas Point construction site and the mines have been dealt with previously.

Services sponsored by bus companies would most likely be discontinued if unprofitable even if the need for the routes still existed. Bus companies would also discontinue profitable services if their buses could generate more profit elsewhere. Some bus companies organize worker bus routes in one direction and school runs in the other in order to turn deadhead runs into revenue runs.

2.5/ Transit Authority Sponsored

There were nine licensed routes in this category. All of the routes serviced factories on the outskirts of municipalities except for one route to a mine in Sudbury.

Five of the factory routes served several firms in the same area. Average route length was only six kilometres. One of the routes had 10 vehicles in operation, while the remaining routes used from one to four vehicles. The maximum daily one-way fare was 60¢.

All the services were initially requested by employers who, in some cases, provided subsidies to the passenger or transit authority. The subsidies were in the form of transit passes for the passengers, and guaranteed minimum payments to the transit authority in case of ridership decreases.

3/ LEGAL AND LABOUR ASPECTS

3.1/ An Outline of the Public Vehicle Act

Worker buses fall within the purview of the Public Vehicles Act (P.V. Act) if the following conditions are met:

- the "bus" has a seating capacity greater than 12 persons,
- the service is offered for compensation, and
- the service operates outside the corporate limits of one urban municipality.

Once these basic criteria are met, a public vehicle operating licence is required which will authorize the provision of the worker bus service.

Once MTC receives an application for such a licence, it is sent to the Ontario Highway Transportation Board (OHTB). Subject to provisions in both the P.V. Act and the Ontario Highway Transport Act; the OHTB is required to hold a public hearing on the application to determine whether there is a public necessity and convenience for such a service. If the service is justified at the hearing, the Board will issue a certificate of public necessity and convenience which prescribes the terms and conditions of the Public Vehicle Operating Licence as granted by the Minister. Once the P.V. Operating licence is granted, the carrier in question is obligated to meet the requirements set out in the P.V. Act such as obtaining a vehicle licence, arranging for insurance and filing a tariff of tolls.

An operating licence, issued under the P.V. Act, permits the licensee to provide a scheduled service. It also permits or forbids charter trips.

Applicants for a P.V. licence can be individuals, companies, municipalities or incorporated organizations. The vehicles used must be public vehicles which are owned or leased by the licensee, and the vehicle driver must be an employee of the licensee.

An employer wishing to provide a worker bus on a specific route need not use the bus company holding the P.V. licence on that particular route. A separate P.V. licence, outlining the specific trip purpose and oriented

to a specific group, could be issued to a different bus company provided that the public convenience and necessity requirements are met.

Provisions in the P.V. Act were designed to protect existing bus companies from undue competition and to guarantee a minimum level of safety and frequency of operation. These provisions were not intended to discourage the implementation of new services where there was a proven need for them.

3.2/ Type of Services Allowed by an Operating Licence

Under the Public Vehicles Act, worker bus services can operate either as a scheduled service or as a chartered service.

Scheduled Service -- The licensee for a scheduled service must file a specific route and schedule with MTC. The Public Vehicle Operating licence granted to the carrier will specify the client group for which the service will be offered and the geographic range of that service. With this type of licence, the operator of a given worker bus service has the option of filing a regular timetable, and routing where service routing and timing is predictable.

The option is also open for the carrier to file a time-table indicating that the routing and/or the timing of the service will be on an "upon request" basis. This latter option would be used for those worker services that do in fact vary over time, dependent on the client needs.

Charter Service -- Bus companies providing a scheduled service often have charter rights as part of their P.V. Operating Licence, and recent regulations have made it easier for them to operate a worker bus as a charter. There are two basic ways to operate a worker bus as a charter service. The first option allows passengers, as a group, to pay a single

fare to an operator who has charter rights on the appropriate route. The second, and least likely option, allows the carrier with charter privileges at either the route origin or destination to charge each passenger a fee which covers the fare in addition to an extra charge for meals, tickets and accommodations. In both cases, the charter trip must originate at a point allowed by the P.V. licence and 75% of the passengers must board at points covered by the licence. It should also be noted that charter operations are normally prohibited for a company whose P.V. licence is provided specifically for a worker bus service.

3.3/ Labour Union Aspects

Labour Unions were involved in worker bus operations in the following areas:

- **Employee and Bus Company Drivers** -- Drivers must belong to the union with which the licensee has a collective agreement. In cases where an employee/driver operates a vehicle owned by a bus company, he may be a member of two unions.

- **Worker Buses and Collective Agreements** -- When the worker bus is organized by an employer, it is generally not part of any union agreement; however, several cases were found in which worker bus services were included in the employee's collective agreement. At Ontario Hydro the union agreement stipulated that subsidized transportation or a travel allowance be provided for employees travelling from Kincardine to the Douglas Point construction site. In this case, senior management chose worker buses to meet this requirement. It appears that this type of agreement is more probable in cases where the worksite is relatively inaccessible, the work is of a limited duration or employee relocation is not feasible.

- **Worker Buses as a Major Item in Labour Negotiations** -- One situation was identified in which the unsatisfactory quality of the worker bus service was a major issue in labour negotiations leading to a month-long strike. The service was provided free to employees and a local bus company operated the service, but the passengers were dissatisfied with the operation and they complained about problems ranging from frequent breakdowns to dirty vehicles. The situation was finally resolved when the employer contracted with another bus company for highway coaches and an improved service.

4/ ESTIMATED COSTS AND BENEFITS

4.1/ Costs

Costs associated with worker bus operations vary widely depending on the type of vehicle used, vehicle use during the day and the role of the driver.

The fixed costs consist of the vehicle purchase, licence, insurance and the driver fee. Variable costs are considered to be fuel and maintenance (Table 4). The $35 000 purchase price of a school bus is only 17% of the cost of a highway coach; therefore, it is not surprising that school buses are used in most operations.

Licence fees are nominal at about $300 per year; however, insurance rates vary from $800 to $2500 per year depending on the size of the vehicle fleet. The cost of the driver also varies depending on whether or not he is an employee driver or is employed by a bus company. The drivers costing the least have other functions during the day such as making school runs or employment at the worksite. Employee drivers receive up to $12 per day, while regular bus drivers averaged an estimated pay of $100 per day ($25 000/year).

In order to determine the significance of the various cost items associated with worker bus operations, it is advantageous to examine the annual costs for all three different approaches -- owner operator, employer sponsored and bus company sponsored (Figure 3).

Fuel and Maintenance -- These costs amount to about 50% of the total annual costs for all the alternatives.

Vehicles -- This cost can be reduced from a maximum of 40% of the annual costs by using the vehicle for other purposes during the day and by acquiring the vehicle as part of a fleet purchase. Many buses, primarily those with an employee driver, wait at the worksite for the return trip and are not used during the day.

Driver -- Driver costs can amount to 20% of the total annual costs if a bus company driver is used who is employed with other duties during the rest of the day. Driver costs can be reduced if an employee driver is used.

Licence and Insurance -- These costs amounted to approximately 10% of the annual costs; however, they can be reduced if the insurance is acquired on a fleet basis.

Based on the assumptions made for a daily one-way trip of 50 km, it appears that the most expensive approach is the owner operator service which costs in the region of $25 000 per year. The cheapest approach to worker bus operations is the bus company service at $20 000 per year. The bus company fleet has a cost advantage over the single vehicle of an owner operator.

4.2/ Benefits

The increased use of high occupancy vehicles obviously lead to significant energy and travel cost savings. Discussions with licensees identified numerous other benefits in addition to the profits to bus companies and owner operators.

Provincial Benefits -- The annual operating cost of driving a subcompact automobile is approximately 17¢/vehicle km ("Car Costs: 1982", Canadian Automobile Association). Assuming a vehicle occupancy rate of 1.23 persons per vehicle, the operating cost for a private car is 13.9¢ per passenger km. The mean fare cost per passenger km for worker buses is 2.60¢ which amounts to a difference of 11.25¢ per passenger km. This annual travel-cost saving is equivalent to $20 million for approximately 7000 passengers who ride in worker buses daily. Included in this amount is approximately $8 million in fuel savings i.e., 16 million litres of fuel.

Employer Benefits -- These were stated to be as follows:

- improved employee attendance,
- improved employee punctuality,

- more relaxed employees, and
- reduced demand for parking and electrical outlets.

Employers' total savings in capital costs for parking facilities is estimated to be in the order of $5 million.

Employee Benefits -- These were stated to be as follows:

- no winter driving,
- no need for second car,
- cheaper than driving one's own car,
- saving to individuals,
- sociability with other employees, and
- more relaxed on arrival at the workplace.

5/ OPPORTUNITIES

At the time of the study, there were 164 worker buses in operation on 67 licensed routes in Ontario. These buses carried approximately 7000 passengers an average distance of 112 km (round trip) daily.

5.1/ Existing Worker Bus Market

The existing market for worker buses is divided into five distinct categories based on route destinations, and is examined in terms of the vehicles used and the number of passengers carried (Table 5). The prevalent type of passengers were factory, agricultural or construction workers. Some buses carried office workers, but the employers in these cases were very large or the buses served areas with numerous offices.

Mines and Hydro Facilities -- These sites were remote and their labour forces were large. In some cases, worker buses were organized because of extreme driving distances which often exceeded 120 km per trip. Other services were organized to meet the transportation provisions which were part of the employees' collective agreement. Over 80% of these facilities were served by employer sponsored operations. A total of 81 vehicles, carrying 3700 passengers, travelled to the mines and hydro facilities daily.

Colleges, Farms and Small Factories -- Passengers to these locations included workers and students who did not normally have access to an automobile. All these services were employer sponsored and they involved 23 vehicles which carried 590 passengers daily.

Factory Relocation -- Factories which moved to new locations suddenly required employees to increase their driving distances to unacceptable lengths. Employee groups or bus companies sponsored these worker bus services. A total of 14 vehicles carried 540 passengers to the relocation sites daily.

Large Offices and Factories -- Sites with large labour forces in urban or suburban areas often required driving distances in excess of 50 km.

Almost all of the commuter operations (95%) were provided by owner operators. Owner operators provided six vehicles which carried 190 passengers daily. Transit authorities provided 22 vehicles to factories on the outskirts of their municipalities. These latter vehicles carried 1200 passengers an average distance of 6 km daily.

5.2/ Existing Vanpool Market

There are currently 114 employer sponsored vanpools in Ontario. While the majority (110) serve large factories or offices, the remaining four serve mine sites (Tables 6 and 7). Although information on privately operated vanpools remains limited, it is estimated that over 200 owner operated services exist in Ontario. Half of these vanpools serve mines and hydro facilities, while the remainder travel to and from large office sites and factories. In addition, an estimated 25 employee groups operate vanpools in the Sarnia area. Third party vanpool operations in which agencies supply vans, maintenance, and administration to employers or employee groups are currently not permitted in Ontario.

The Ontario Van Pool Organization (OVPO) provides services similar to those of a third party agency; however, they lease their vans to individuals. This organization provides a total of 35 vans to people living in Toronto, Ottawa and Blind River.

5.3/ Potential Market for Worker Buses

Most worker bus services are sponsored by employers. The services are often necessary because employees have no alternative means of transportation to the worksite. The buses primarily service remote sites such as mines, hydro facilities, colleges, farms and small factories. Few services operate to relocated factories, large factories and offices because there is strong competition from vanpools in this area (Figure 4).

There are approximately 500 firms in Ontario with more than 500 employees. Although vanpool penetration of this market is still quite low, it appears that firms such as these favour vanpooling over worker buses. Vanpools are preferred despite the fact that bus companies can provide vehicles, maintenance, administrative services and charge cheaper fares. Worker bus fares for a one-way trip of 50 km average 2.60¢/passenger km

compared with 3.40¢/passenger km for an employer sponsored vanpool travelling the same distance. Weekly fares amount to $13 for worker buses and $17 for vanpools. Despite these savings, it is not surprising that vanpools are favoured when one considers the following advantages of vanpooling over worker buses.

Pool Formation -- Only 11 people are needed to make a vanpool operation viable compared to 25-30 for worker buses.

Convenience -- The arrangements for picking up riders are much easier for vanpools because of the smaller number of passengers involved. At this time, 80% of vanpoolers are picked up at their homes.

Comfort -- Almost all the vehicles used in vanpool operations are fitted with options for the comfort of the passengers. These options include cloth seats, air conditioning, AM:FM radio and tinted glass. Worker buses, on the other hand, are usually school buses, although highway coaches are used on some of the longer trips.

Promotion -- Since employer sponsored vanpooling became legal in Ontario in 1977, MTC has promoted the service to large firms. MTC has also provided technical assistance to people wishing to institute vanpool operations. Worker buses, on the other hand, have not been promoted by the Ministry. Interviews with selected licensees have indicated that virtually no promotion has been initiated by any of the parties involved with worker bus operations. Some of the bus companies stated that they have tried to promote worker bus services to employers, but they have met with little success. The main reason cited for their failure is that employers did not want to provide any kind of guarantee or sign a contract for the services. Employers also feared that organizing such a service might involve a great deal of time and effort.

Although worker buses appear to be a viable option in specific situations and there are no legal impediments to the expansion of such services, it seems that they are limited to virtually captive riders e.g., people employed at mines, hydro facilities, colleges, farms, small factories and relocated firms. There are, however, opportunities for bus companies to expand their market to large firms by adopting one of the following measures.

Provide Vans, Drivers and Support Services -- This approach has already been adopted in regard to buses. A disadvantage to this method is that driver costs will increase fares.

Provide Vans and Support Services Only, and Use an Employee as the Driver -- This approach is legal when the service is provided by existing bus companies. In this situation, the driver of the van would have a permanent job at the worksite and would drive as a secondary occupation. During the performance of the driving duties, the driver would be under the bus operator's control and direction. Employers benefit from this type of arrangement by having the bus company undertake the provision of vans and services. The bus company also benefits by creating new markets which should generate more profit.

6/ CONCLUSIONS

There were 159 routes licensed for worker bus operations in Ontario at the time of the study. Licensees were contacted by telephone for information on 67 of the routes. An additional 46 routes were discontinued prior to the study and no information could be obtained on the remaining services. Based on the investigation, the following conclusions were drawn.

6.1/ Status of Operations

There were 164 vehicles operating on the 67 routes investigated. These vehicles carried almost 7000 passengers daily, an average one-way route distance of 56 km. The mean fare cost per passenger was 2.60¢ per km. The vehicles used were usually in the 40-50 passenger range. Highway coaches were used on excessively long trips, while modified school buses were used elsewhere.

Sponsorship -- Employers sponsored 104 worker buses to mines, hydro facilities, colleges, farms and small factories. Owner operators provided six vehicles to large factories, while employee groups sponsored 18 vehicles to mines, hydro facilities, factories and office sites. Bus companies sponsored 13 vehicles to mines, hydro facilities, relocated factories and office sites. Transit authorities sponsored 23 vehicles for local services primarily to large factories on the outskirts of their municipalities.

Legal and Labour Aspects -- The current provisions in the Public Vehicles Act were designed to protect existing bus companies from undue competition and to guarantee a minimum level of safety and frequency of operation. The provisions were not intended to discourage new services where the need existed. These provisions did not pose any impediments to the licensees interviewed, and they should not pose any impediments to further expansion of worker bus services.

A worker bus driver is required to be a member of the union with which the licensee has a collective agreement. In some cases, the provision of

transportation forms part of the employees' collective agreement. In the discussions with licensees, no problems were cited with respect to union agreements or regulations.

Estimated Costs and Benefits -- Fuel and maintenance constitute approximately 50% of the total annual costs. Vehicle costs amount to as much as 40% in some cases; however, this percentage could be reduced by fleet purchasing and by using the vehicle during the day. Driver costs are usually no higher than 20% of the annual costs provided that the driver is employed during the day either at the worksite or on other bus runs.

Annual benefits to the province amount to $20 million in travel cost savings. This figure includes $8 million in fuel savings. Benefits to the employer include improved employee attendance and a reduced need for parking facilities. Total savings in capital costs for parking facilities for all employers amount to $5 million. Benefits to the employee include economy as well as the elimination of a second car and winter driving.

6.2/ Opportunities

Before an employee or employer sponsor implements a worker bus service, it is important that they explore all options for the provision of vehicle and driver. The list of options in each particular situation will depend on the following:

- the willingness of the sponsor to purchase or lease a bus,
- the availability of a bus company vehicle with or without a bus driver, and
- the availability of an employee driver.

Evaluating the cost of the options will be important in the selection of the most cost-effective operation.

Assuming no change in current trends, further opportunities for worker bus services appear limited to locations such as mines, hydro facilities, colleges, farms, and small factories. There may be some opportunities to provide services to large factories and offices, but this option appears

unlikely bearing in mind the competition from vanpools. In fact, most of the large factories and offices in the province have already been contacted by MTC to determine their interest in employer sponsored vanpooling.

The best opportunities for the expansion of worker bus services lie with the bus companies who already possess the advantages of having the vehicles, drivers and the ability to obtain saving through fleet purchases. Bus companies could also expand their market to large firms by considering the provision of smaller more comfortable vehicles i.e., vans with or without drivers.

Table 1/ Known Operating Licence Holders for Worker Buses in Ontario

Licensee Type	Total No. of Licensees	Individual No. of Licensees	No. of Licensed Routes/Licensee	Total No. of Licensed Routes
Employee	5	5	1	5
Employer*	4	2	1	6
		2	2	
Bus Company	23	15	1	47
		1	2	
		3	3	
		3	4	
		1	9	
Transit Authority	8	7	1	9
		1	2	
Total Licensees Contacted	40	40	Not Applicable	67
Licensees Not Contacted or Refused to Answer	28	28	Unknown	46
Total Licensees in Operation	68	68		113
Discontinued Licences	33	27	1	46
		4	2	
		1	4	
		1	7	
Total No. of Licensees and Routes	101			159

* NOTE: Includes one service which does not have a P.V. licence as a fare is not charged.

Table 2/ Locations of Worker Buses Providing Services in Ontario

COMMUTER SERVICES (MEAN ONE-WAY TRIP OF 56 km)		
Work Type	Work Location	Total No. of Routes
Mines	Copper Cliff, Lakefield, New Liskeard, Pickle Lake, Red Lake (3), Renfrew, Sudbury, Timmins(3)	12
Hydro Construction Sites	Douglas Point	7
Hydro Generating Stations and Labs	Cameron Falls, Chalk River (2) Rolphton	4
Colleges and Hospitals	Brampton, Goderich, Kitchener, Oakville, Ottawa, Perth, St. Marys, Seaforth	8
Farms and Nurseries	Chatham (2), Mississauga, Pickering (2), Pontypool, Smooth Rock Falls (2)	8
Small Factories Unskilled Labour	Brampton, Dresden, Leamington (2), Markham	5
Factory Relocation	Brockville, Renfrew (2)	3
Large Factories	Kingston, Malton, Oshawa (3)	5
Large Offices	Ottawa (5)	5
	TOTAL ROUTES: COMMUTER SERVICES	57

LOCAL SERVICES (MEAN ONE-WAY TRIP OF 6 km)		
Mines	Sudbury	1
Large Factories	Cornwall (2), Hamilton, Maitland (2), Peterborough, Sault Ste. Marie, Stratford	8
	TOTAL ROUTES: LOCAL SERVICES	9

Table 3/ Characteristics of Worker Buses in Ontario

Sponsor		WORK LOCATION BY ROUTE					Total No. of Routes	No. Routes Using Employee Driver	Total No. of Vehicles	Total No. of Passengers Daily	Mean Route Length km	Daily Oneway Fare Range $	Fare Cost ¢/km
		Mines and Hydro	Colleges, Farms, Small Factories*	Factory Reloc.	Large Factories	Large Offices							
Owner Operator		0	0	0	5	0	5	5	6	193	62	1.00-1.50	2.3
Employee Group		7	0	1	0	4	12	6	18	743	77	1.00-4.00	3.0
Employer	Fare Charged	3	5	0	0	0	8	2	57	2450	38	0.90-1.00	2.2
	No Fare	9	16	0	0	0	25	5	47	1839	52	NA	NA
Bus Company		4	0	2	0	1	8	0	13	403	51	0.75-3.00	2.81
Transit Aurthority		1	0	0	8	0	9	0	23	1274	6	0.40-0.60	NA
TOTALS		24	21	3	13	5	67	18	164	6902	280	NA	10.46
Mean Value Per Route		NA									56		2.60

* Factories usually employing unskilled labour who do not have the use of a car.
NA Not Applicable.

Table 4/ Estimated Costs Associated with Worker Buses 1982

1/ FIXED	
• VEHICLE	
School Bus	$ 35 000
Highway Coach	$200 000
Transit Bus	$150 000
• LICENCE	
Normal Bus (7 000 kg-12 000 kg gross wt)	$300/year
• INSURANCE	
Individual Vehicle	$2500/year
Fleet Rate	$800 to $2000
• DRIVER	
Employee Driver	No charge to $12/day
Regular Bus Driver	$12/hour
2/ VARIABLE	
• FUEL	18¢/km
• MAINTENANCE	30¢/km

SOURCE: Transit Office, MTC

Table 5/ Existing Worker Bus Market

Route Destinations		SPONSORSHIP						
		Owner Operators	Employee Group	Employer	Bus Company	Subtotal Commuter Services	Transit Authority	Total
Mines and Hydro Facilities	Routes	-	7	12	4	23	1	24
	Vehicles	-	9	81	8	98	1	99
	Passengers	-	385	3707	276	4368	60	4428
Colleges, Farms and Small Factories	Routes	-	-	21	-	21	-	21
	Vehicles	-	-	23	-	23	-	23
	Passengers	-	-	592	-	592	-	592
Factory Relocation	Routes	-	1	-	2	3	-	3
	Vehicles	-	2	-	3	5	-	5
	Passengers	-	42	-	105	147	-	147
Large Factories	Routes	5	-	-	-	5	8	13
	Vehicles	6	-	-	-	6	22	28
	Passengers	193	-	-	-	193	1214	1407
Large Offices	Routes	-	4	-	1	5	-	5
	Vehicles	-	7	-	1	8	-	8
	Passengers	-	316	-	25	341	-	341
Unknown Destination	Routes	-	-	-	1	-	-	1
	Vehicles	-	-	-	-	-	-	-
	Passengers	-	-	-	-	-	-	-
Totals	Routes	5	12	33	7	57	9	66
	Vehicles	6	18	104	13	141	23	164
	Passengers	193	743	4299	406	5641	1274	6915

Table 6/ Employer Sponsored Van Pools in Ontario 1983

Work Location	EMPLOYER		No of Employees	No. of Vans	One Way Route Dist km	FARE	
	Name	Type				One Way $	¢/km
Toronto	Consumers Gas	Office	900	3	38	2.25	5.81
	Manville	Office	95	2	60	2.44	2.46
	Bell	Office	1 500	7	50	1.68	3.36
		Office	600	1	50	1.68	3.36
		Office	3 100	3	50	1.68	3.36
Windsor	Chrysler	Office	580	8	45	1.20	2.67
Falconbridge	Falconbridge	Office	**	2	70	1.88	2.68
Waterloo	Mutual Life	Office	1 400	6	15	0.79	5.25
London	3M	Office	1 325	15	24	0.94	3.90
Sudbury	Inco	Office	11 000	1	54	1.25	4.32
Toronto	General Foods	Office (REL)	450	1	50	1.17	2.34
Hamilton	Westinghouse	Factory (REL)	900	2	60	1.32	2.20
Brampton	Union Carbide	Factory (REL)	140	1	55	1.55	3.54
Hamilton	Dofasco	Factory	9 500	2	48	1.83	3.82
Bramalea	Ford	Factory	500	2	63	1.14	3.62
St. Thomas	Ford	Factory	3 000	8	63	1.14	3.62
Windsor	Chrysler	Factory	2 900	13	45	1.20	2.67
Windsor	Chrysler	Factory	4 300	9	45	1.20	2.67
Ajax	Chrysler	Factory	1 600	10	45	1.20	2.67
Brampton	Northern Telecom	Factory	3 000	3	45	1.70	3.80
Toronto	Garrett	Factory	750	8	60	1.68	2.80
Toronto	Garrett	Factory	100	2	60	1.68	2.80
London	3M	Factory	1 325	1	24	0.94	3.90
Falconbridge	Falconbridge	Mine	**	3	70	1.88	2.68
Sudbury	Inco	Mine	11 000	1	54	1.25	4.32
Totals (22)				114	1 243	36.63	84.62
Mean Values					50		3.40

** Unknown.

Table 7/ Existing Van Pool Market

Market		Sponsor				
		Owner Operators [3]	Employee Group [1]	Employer	Third Party Agency [2]	Total
Mines and Hydro Facilities	Routes	**	-	4	-	4
	Vehicles	100	-	4	-	104
	Passengers	1000	-	40	-	1040
Colleges and Farms etc.	Routes	-	-	-	-	-
	Vehicles	-	-	-	-	-
	Passengers	-	-	-	-	-
Factory Office Relocation	Routes	-	-	3	-	3
	Vehicles	-	-	4	-	4
	Passengers	-	-	40	-	40
Large Offices	Routes	**	-	**	-	-
	Vehicles	85	-	48	-	133
	Passengers	850	-	480	-	1330
Large Factories	Routes	**	1	**	-	1
	Vehicles	50	25	58	-	133
	Passengers	500	250	580	-	1330
Totals	Routes	**	**	**	-	-
	Vehicles	235	25	114	-	374
	Passengers	2350	250	1110	-	3710

** Unknown.
1 Numbers in this group are estimated.
2 Currently illegal except for bus companies.
3 Ontario Van Pool Organization (OVPO) vanpools are included in owner operator group. Numbers in this group are estimated.

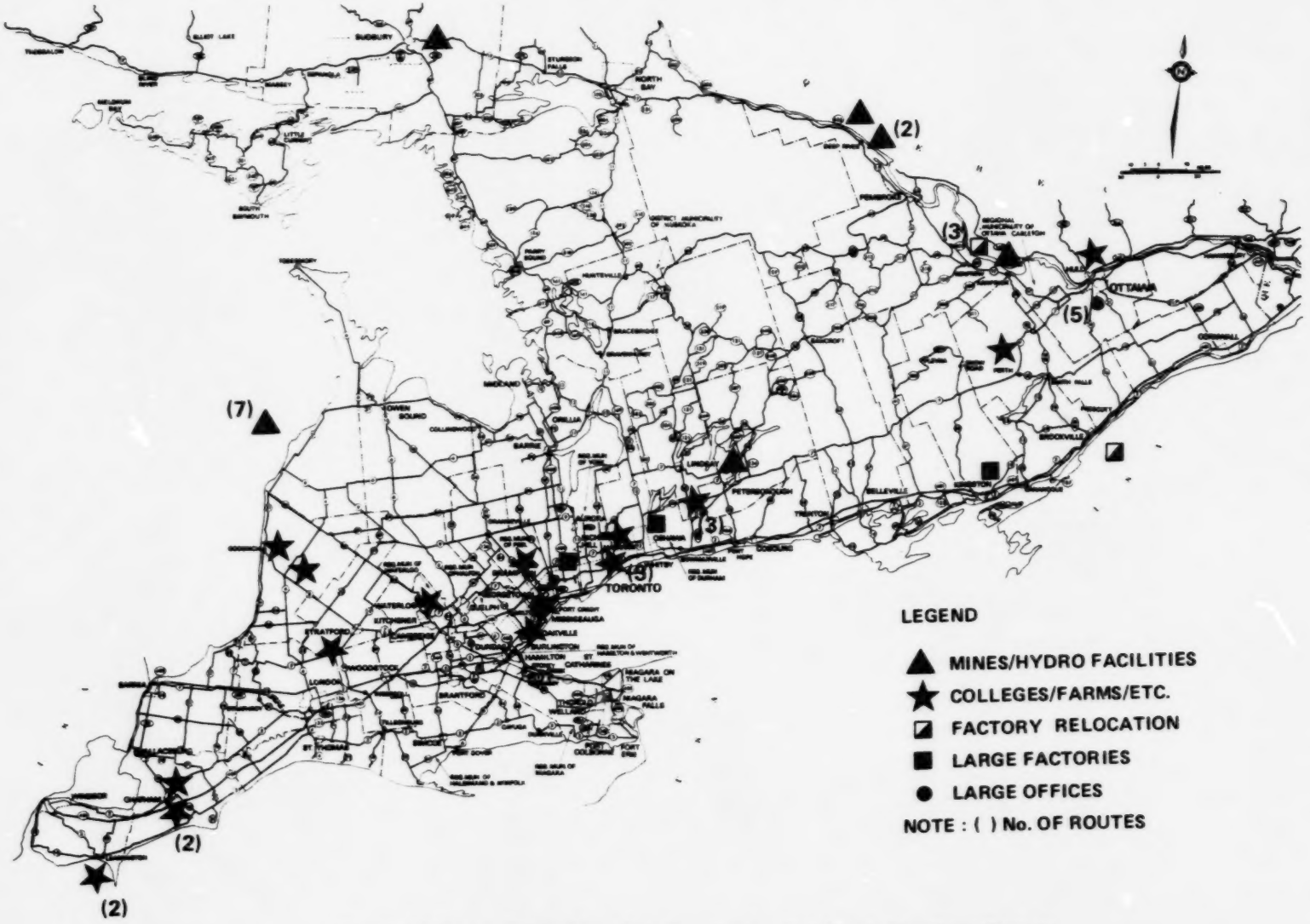


Figure 1/ Worker Buses Providing Communter Services in Southern Ontario

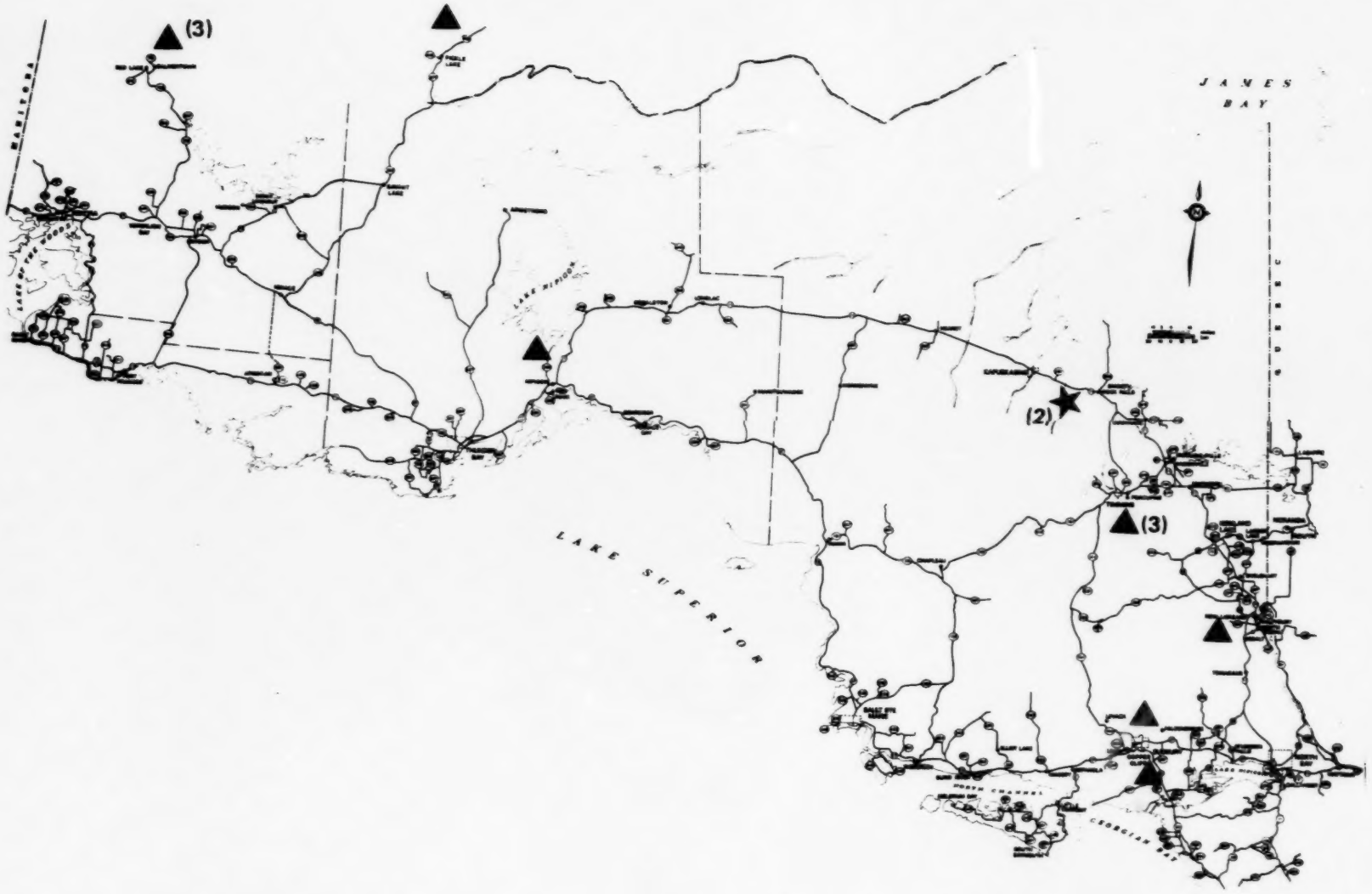
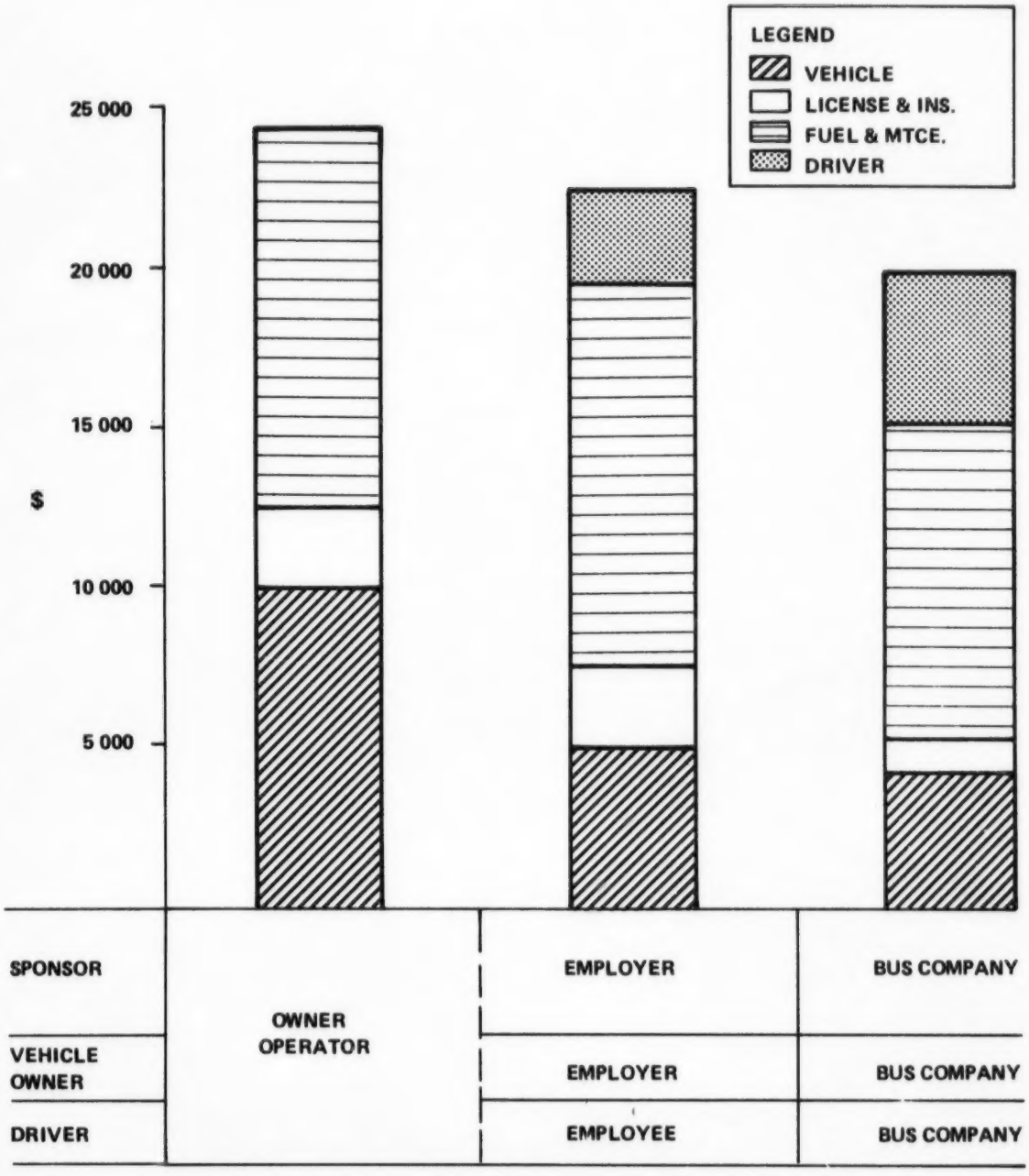


Figure 2/ Worker Buses Providing Commuter Services in Northern Ontario



NOTES :
1. VEHICLE DEPRECIATES OVER 5 YEARS, INTEREST RATE 12%
2. BUS COMPANY SAVES 15% DUE TO FLEET PURCHASES
3. VEHICLE USED 50% OF TIME FOR OTHER FUNCTIONS EXCEPT IN CASE OF 'OWNER OPERATOR'
4. IN ONE YEAR THERE ARE 240 WORKING DAYS

Figure 3/ Annual Cost of Worker Bus Operation For 50 km One Way Daily-Trip

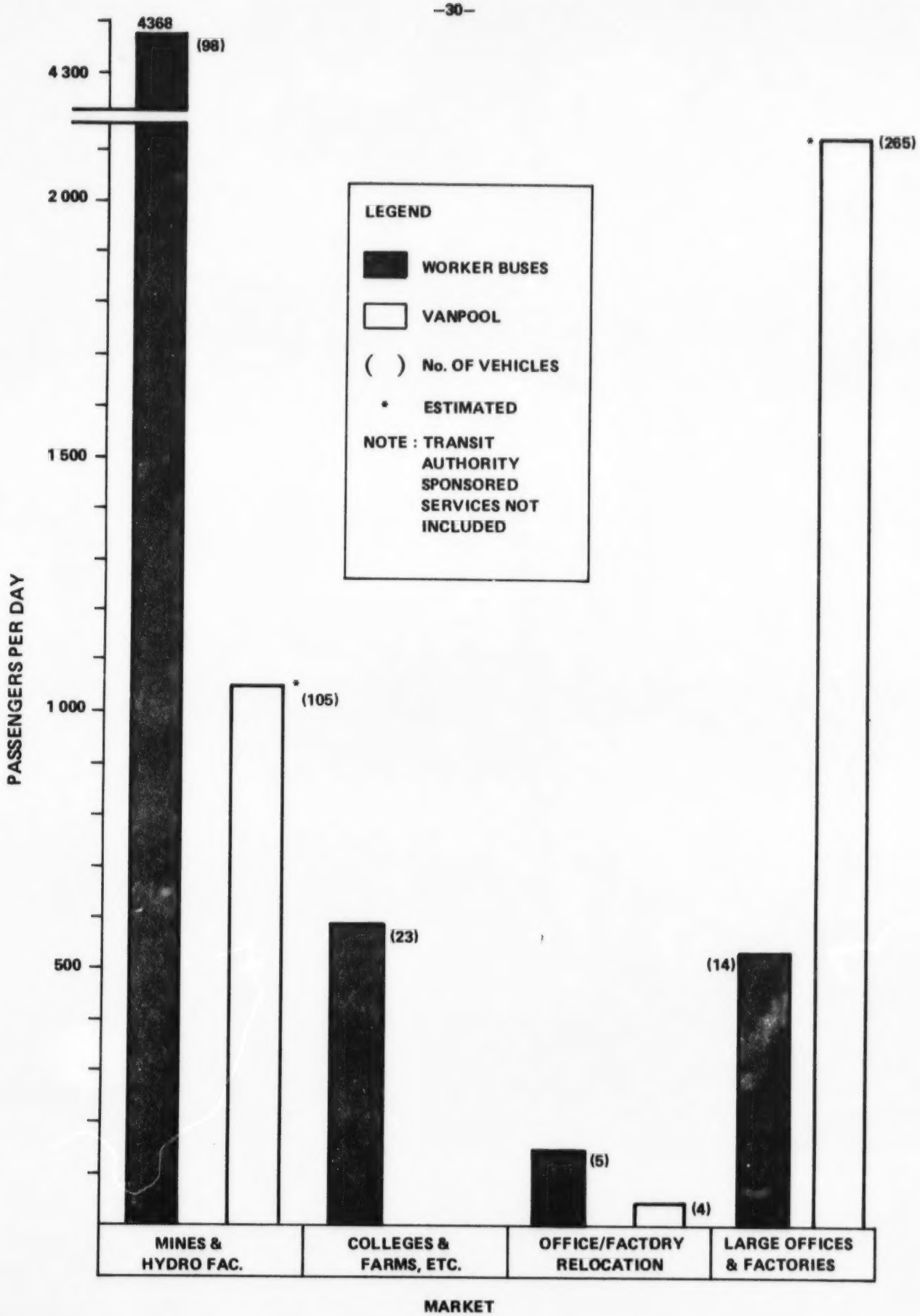


Figure 4/ Comparison of Markets for Worker Buses and Vanpools

APPENDIX A
DETAILS OF WORKER BUSES

Table A1/ Employee Sponsored: Owner Operators

Vehicle Own rship (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day	Fare	
				Name	Type							One-Way $	Per km ¢
Employee	Employee	Sydenham	Kingston	Alcan	Factory	1 500	0	40	1	18	--	1.00	2.50
		Orangeville	Malton	McDonnel Douglas	Factory	2 300	0	56	1	48	--	1.50	2.68
		Indian River	Oshawa	General Motors	Factory	18 500	0	96	2	38	--	1.60	1.67
		Cannington					0	61	1	28	--	1.55	2.54
		Port Hope					0	56	1	12	--	**	**
				Totals				309	6	144	177	5.65	9.39
				Mean Values				62				1.41	2.35

** Unknown.

Table A2/ Employee Sponsored: Employee Group

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day	Fare	
				Name	Type							One-Way $	Per km ¢
Bus Company	Employee	Wahnapitae	Copper Cliff	Inco	Mine	**	0	56	1	48	--	1.00	1.79
		Walkerton	Douglas Point	Ontario Hydro	Const. Site	3600	0	40	1	44	--	1.50	3.76
		Paisley					1	32	1	44	--	1.10	3.44
		Hanover					1	48	1	44	--	1.65	3.44
		Chesley					1	48	1	44	--	1.65	3.44
		Smith Falls	Brockville	Microtel	Factory	700	0	51	2	20	--	1.80	3.52
	Bus Company	Sudbury	Dennison Mine	Dennison Mine	Mine	**	3	192	2	43	--	**	**
		Kitchener	Douglas Point	Ontario Hydro	Const. Site	3600	0	176	2	44	--	4.00	2.28
		Arnprior	Ottawa	Several	Down-town Offices	**	0	74	1	47	--	2.00	3.70
		Antrim					0	72	1	47	--	1.93	2.68
		Packenham					0	69	2	47	--	1.79	2.60
		Carleton Place					0	66	3	47	--	1.73	2.62
				Totals				924	18		743	20.15	33.27
				Mean Values				77				1.68	3.02

** Unknown.

Table A3/ Employer Sponsored: Fare Charged

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day	Fare	
				Name	Type							One-Way $	Per km ¢
Employee	Employee	Scarborough	Markham	C & M Products	Factory	300	1	32	1	48	--	0.90	2.82
		Kincardine	Douglas Point	Ontario Hydro	Const. Site	3600	2	27	19	44	--	**	**
	Bus Company	Deep River	Chalk River	AECL	Nuclear Lab	1200	0	29	33	45	--	**	**
		Pembroke					0	54				**	**
Bus Company	Bus Company	Etobicoke	Brampton	K Mart	Ware-house	**	1	24	1	40	--	**	**
		Burlington	Brampton	Sheridan College	College	** •	6	55	1	48	--	1.00	1.82
		Acton	Oakville	Sheridan College	College	** •	3	45	1	48	--	1.00	2.22
		Peter-borough	Pontypool	Min. of Natural Res.	Tree Farm	**	0	40	1	44	--	0.90	2.25
				Totals				306	57	317	2450	3.80	9.11
				Mean Values				38				0.95	2.28

• Students.
** Unknown.

Table A4/ Employer Sponsored: No Fare -- Mines & Hydro Facilities

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day
				Name	Type						
Bus Company	Bus Company	Timmins	Kidd Mine	Texas Gulf	Mine	**	0	29	17	40	--
		Porcupine					0	40			
		Timmins	Metal-lurgical Site	Texas Gulf	Mine	**	0	29			
		Cochenoer	Griffith Mine	Griffith Mine	Mine	**	0	139	1	42	--
		Madson					0	131	1	42	
		Red Lake						99	1	42	
		Pickle Lake	Umex Mine	Umex	Mine	**	9	29	1	48	--
		Chalk River	Rolphton	Ontario Hydro	Nuclear Station	400	0	32	7	66	--
	Employee	Nipigon	Cameron Falls	Ontario Hydro	Hydro Electric Station	30	3	22	1	40	--
				Totals				550	29	320	1372
				Mean Values				61			

** Unknown.

Table A5/ Employer Sponsored: No Fare -- Colleges

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees •	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day
				Name	Type						
Bus Company	Bus Company	Stratford	Seaforth	Conestoga College	College	**	1	40	1	11	--
		Stratford	St. Mary's	Conestoga College	College	**	1	21	1	11	--
		Stratford	Kitchener	Conestoga College	College	**	1	48	1	44	--
		Stratford	Goderich	Conestoga College	College	**	1	72	1	44	--
		Brockville	Perth	Reg. School of Nursing	College	**	2	70	1	30	--
		Brockville	Ottawa	Reg. School of Nursing	College	**	0	112	1	25	--
				Totals				363	6	165	93
				Mean Values				61			

• Students.
** Unknown.

Table A6/ Employer Sponsored: No Fare -- Farms and Small Factories

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day
				Name	Type						
Bus Company	Bus Company	Windsor	Leamington	HJ Heinz	Factory	**	0	64	1	45	--
		Sarnia	Dresden	Canadian Canners	Factory	**	0	77	2	46	--
		Chatham				••	0	27	1	46	
		Wallaceburg	Local Farm	Canadian Canners	Farm	**	0	19	1	46	--
		Chatham				••	0	19	1	46	
		Cochrane	Smooth Rock Falls	Min. of Natural Resource	Tree Farm	** ••	1	52	2	40	--
	Employee	Cochrane	Smooth Rock Falls	Min. of Natural Resource	Tree Farm	** ••	1	52	1	40	--
		Toronto	Pickering	Dominion Mushroom	Farm	**	0	40	1	44	--
		Oshawa				••	0	24	1	44	--
Employer	Employee	Toronto	Missis-sauga	Sheridan Nursery	Tree Farm	** ••	5	37	1	24	--
				Totals				411	12	421	372
				Mean Values				41			

•• Seasonal
** Unknown

Table A7/ Bus Company Sponsored

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day	Fare	
				Name	Type							One-Way $	Per km ¢
Bus Company	Bus Company	Owen Sound	Douglas Point	Ontario Hydro	Const. Site	3580	0	80	1	43	--	2.50	3.12
		New Liskeard	Sherman Mines	Sherman Mines	Mine	**	0	61	4	48	--	1.35	2.21
		Lakefield	Methuen	American Nephe-lime	Mine	**	0	40	1	44	--	1.65	4.14
		Renfrew	Haley Station	Dominium Magnes-ium	Mine	**	0	32	2	48	--	0.75	2.34
		Eganville	Renfrew	Playtex	Factory	300	0	40	1	48	--	0.85	2.12
		Arnprior					0	32	2	48	--	0.85	2.66
		Merrick-ville	Ottawa	Various	Down town Offices	**	0	72	1	42	--	2.20	3.06
		Elmvale	Colling-wood	**	**	**	0	24	1	44	--	3.00	12.50
				Totals				381	13	365	407	13.15	19.65
				Mean Values				48				1.64	2.81

Unknown.

able A8/ Transit Authority Sponsored

Vehicle Ownership (Licensee)	Driver	Route Origin	Work Location	Employer		No. of Employees	No. of Pickup Points	One-Way Route Distance km	No. of Buses	Seating Capacity Avg/Bus	Passengers Per Day	Fare	
				Name	Type							One-Way $	Per km $
ransit uthority	Transit Authority	Sudbury	Frood-Stobie Mine	Inco	Mine	**	0	6	1	45	--	0.40	-
		Sault Ste. Marie	Sault Ste. Marie	Algoma	Factory	10 800	0	3	1	45	--	0.40	-
		Prescott	Maitland	Dupont	Factory	850	0	8	3	48	--	0.60	-
		Brockville					0	11					
		Hamilton	Hamilton	Allen Indus-tries	Factory	500	0	3	1	44	--	0.50	NA
		Stratford	Stratford	Various	Factor-ies	**	1	**	2	37	--	**	-
		Peter-borough	Peter-borough	Various	Factor-ies	**	0	**	10	45	--	0.50	-
		Cornwall	Cornwall West	Various	Factor-ies	**	0	6	1	49	--	0.50	-
		Cornwall	Cornwall East				0	6	4	45	--	0.50	-
				Totals				43	23	358	1274	3.40	
				Mean Values				6				0.40	

Unknown.